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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/925,506	09/08/97	FRIMM	F 09389/002001

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EXAMINER

MAYO, T

ART UNIT

PAPER NUMBER

3672

DATE MAILED: 01/14/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/925,506

Applicant(s)
FRIMM et al.

Examiner
Tara L. Mayo

Group Art Unit
3672



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-10 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-10 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on 8 Sep 1997 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 5

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

1. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 3672.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "(C)" and "(D)" both of Figures 2 and 6. Correction is required.

3. The drawings are objected to because of missing section lines, improper lead lines, and missing reference numerals.

In Figure 1, include a section line indicative of the section view shown in Figure 2.

Repeat the correction for both Figures 5 and 8. See 37 C.F.R. 1.84 (h)(3).

In both Figures 2 and 8, add a lead line with an arrow touching the surface which reference numeral "10" is indicating. See 37 C.F.R. 1.84 (r)(2).

Add reference numerals to both Figures 9 and 10 to facilitate understanding of the drawings.

In Figure 10, add a freestanding arrow to the lead line of reference numeral "10".
Correction is required.

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4. Applicant is required to submit a proposed drawing correction in response to this Office action. Any proposal by the applicant for amendment of the drawings to cure defects must consist of two parts:

- a) A *separate* letter to the Draftsman in accordance with MPEP § 608.02(r); and
- b) A print or pen-and-ink sketch showing changes in *red ink* in accordance with MPEP § 608.02(v).

IMPORTANT NOTE: The filing of new formal drawings to correct the noted defect may be deferred until the application is allowed by the examiner, but the print or pen-and-ink sketch with proposed corrections shown in red ink is required in response to this Office Action, and *may not be deferred*.

Claim Objections

5. Claim 1 is objected to because of the following informalities: potential rejection under 35 U.S.C. §112, second paragraph.

In claim 1 at line 12, delete "such" and insert therefor --said at least four--.

Appropriate correction is required.

Claim Rejections - 35 U.S.C. § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuller, Jr. (U.S. Patent No. 3,391,666) in view of Lidén (U.S. Patent No. 4,498,412) and O'Reilly et al. (U.S. Patent No. 3,490,406).

Schuller, Jr. '666 shows a semi-submersible vessel (10) comprising a superstructure deck (15), and a ring pontoon (12) having forward, aft, starboard, and port sections, wherein said superstructure is supported by at least four columns (13) located near the forward and aft ends of the starboard and port sections of the ring pontoon. Schuller, Jr. '666 also shows a non-square ring pontoon. Schuller, Jr. '666 does not show forward and aft pontoon sections having centerline partitions, or a first interior vertical partition in each of said at least four columns lying in the same plane as a side of either the forward or aft section of the ring pontoon. See Figures 1, 2, and 5 through 9.

Lidén '412 shows a semi-submersible offshore platform comprising a ring pontoon (15) having forward, aft, starboard, and port sections, and four columns (14), wherein for the purposes of storage and ballast, the pontoon includes vertical, centerline bulkheads in each section (21 and 22; col. 2, lines 33 through 37) and the columns each include vertical, centerline

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bulkheads (26 and 27; col. 2, lines 59 through 63) which are extensions of the centerline bulkheads of adjacent pontoon sections. The ring pontoon shown by Lidén '412 further includes reinforcing, triangular-shaped storage tanks (25) such that its inner perimeter forms an octagon. See Figures 1 and 2.

It would have been obvious to one of ordinary skill in the art of floating platforms at the time of invention to modify the device shown by Schuller, Jr. '666 with centerline partitions in the forward and aft pontoon sections as taught by Lidén '412. The motivation for modification would have been to increase the storage capacity of the marine vessel.

O'Reilly et al. '406 show a semi-submersible platform (10) with a buoyant hull (14) having forward, aft, starboard, and port sides, and a superstructure deck (12) supported by at least four columns (16), wherein two of the at least four columns are positioned such that their centerlines lie in the same plane as a side of the aft end of the hull. See Figures 1 through 4.

O'Reilly et al. '406 are evidence that it would have been obvious for one of ordinary skill in the art of floating platforms at the time of invention to further modify the device shown by Schuller, Jr. '666 in view of Lidén '412 such that a first interior vertical partition in each of the columns lies in the same plane as a side of either the forward or aft section of the ring pontoon. The motivation for further modification would have been to decrease the resonant motion of the deck structure as both the position and spacing of the columns affect the movement of the deck structure as caused by waves.

8. Claims 3, 4, and 6 through 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuller, Jr. (U.S. Patent No. 3,391,666) in view of O'Reilly et al. (U.S. Patent No. 3,490,406).

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Schuller, Jr. '666 shows a semi-submersible vessel (10) comprising a superstructure deck (15), and a ring pontoon (12) having forward, aft, starboard, and port sections, wherein said superstructure is supported by at least four columns (13) located near the forward and aft ends of the starboard and port sections of the ring pontoon. Schuller, Jr. '666 also shows a non-square ring pontoon. Schuller, Jr. '666 does not show each column having a vertical centerline located inward of both the forward and aft sections of the ring pontoon. See Figures 1, 2, and 5 through 9.

O'Reilly et al. '406 show a semi-submersible platform (10) with a buoyant hull (14) having forward, aft, starboard, and port sides, and a superstructure deck (12) supported by at least four columns (16), wherein the vertical centerlines of the columns are located inward of the axial centerline of the aft hull section. See Figures 1 through 4.

O'Reilly et al. '406 are evidence that it would have been obvious for one of ordinary skill in the art of floating platforms at the time of invention to modify the device shown by Schuller, Jr. '666 in view of Lidén '412 such that the vertical centerline of each of the columns is located inward of the axial centerlines of both the forward and aft sections of the ring pontoon. The motivation for further modification would have been to decrease the resonant motion of the deck structure as both the position and spacing of columns affect the movement of the deck structure as caused by waves.

With regards to claims 4 and 8, it would have been an obvious design choice for one of ordinary skill in the art of floating platforms at the time invention to make the outside perimeter of the device shown by Schuller, Jr. '666 as modified above O'Reilly et al. '406 octagonal. The motivation for making the design choice would have been to effect desired periods of pitch and roll for the vessel.

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With regards to claim 6, it is a well known expedient in the art of floating platforms to use radial braces extending from a ring pontoon to an above-supported deck structure to impart rigidity to the platform structure.

With regards to claim 7, it would have been an obvious design choice for one of ordinary skill in the art of floating platforms at the time of invention to further modify the device shown by Schuller, Jr. '666 in view of O'Reilly et al. '406 such that the forward and aft pontoon sections would be of a reduced height. The motivation for further modification would have been for ease of transport to the installation site; i.e., the motion of forward and aft pontoon sections having reduced heights would be less restricted by hydrodynamic forces during transport.

With regards to claim 9, it would have been obvious for one of ordinary skill in the art of floating platforms at the time of invention to modify the device shown by Schuller, Jr. '666 in view of Lidén '412 such that the vertical centerline of each of the columns is located inward of the axial centerlines of each the forward, aft, starboard, and port sections of the ring pontoon. The motivation for further modification would have been to decrease the resonant motion of the deck structure as both the position and spacing of the columns affect the movement of the deck structure as caused by waves.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schuller, Jr. (U.S. Patent No. 3,391,666) in view of O'Reilly et al. (U.S. Patent No. 3,490,406) as applied to claim 3 above, and further in view of Lidén (U.S. Patent No. 4,498,412).

Schuller, Jr. '666 in view of O'Reilly et al. '406 disclose all of the features of the claimed invention with the exception of a ring pontoon having an octagonal shaped inner perimeter.

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Lidén '412 shows a semi-submersible offshore platform comprising a ring pontoon (15) having forward, aft, starboard, and port sections, and four columns (14), wherein for the purposes of storage and ballast, the pontoon includes vertical, centerline bulkheads in each section (21 and 22; col. 2, lines 33 through 37) and the columns each include vertical, centerline bulkheads (26 and 27; col. 2, lines 59 through 63) which are extensions of the centerline bulkheads of adjacent pontoon sections. The ring pontoon shown by Lidén '412 further includes reinforcing, triangular-shaped storage tanks (25) such that its inner perimeter forms an octagon. See Figures 1 and 2.

It would have been obvious to one of ordinary skill in the art of floating platforms at the time of invention to further modify the device shown by Schuller, Jr. '666 in view of O'Reilly et al. '406 with a ring pontoon having an octagonally shaped inner perimeter. The motivation for modification would have been to provide additional storage capacity.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kirby (U.S. Patent No. 2,422,168) shows an octagonally shaped base (18) for a marine tower which is floated to the installation site and then ballasted to a desired underwater position. See Figures 1 through 4.

Wolff (U.S. Patent No. 3,407,610) discloses a submersible vessel having an irregular polygonal stabilizing pattern and the method of making the same. See col. 1 line 22 through col. 2, line 31; and Figures 1 through 3.

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White et al. (U.S. Patent No. 5,135,327) show sectional views of pontoon embodiments.
See Figures 6 and 7.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tara L. Mayo whose telephone number is (703) 305-3019. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

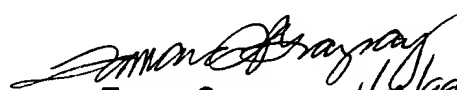
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tamara L. Graysay, can be reached on (703) 308-2144. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3597.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.



TLM

13 January 1999



Tamara Graysay
Supervisory Patent Examiner
Group 3600
1/13/99